

5.10 Effects of Program/Alternative Implementation on Transportation/Traffic by Bioregion

This section summarizes the impacts on transportation and traffic due to implementing either the Proposed Program or any of the alternatives. Only the effects of traffic volume were analyzed. Issues related to road design, parking, air traffic patterns or alternative transportation were not applicable to the potential effects from VTP treatments.

5.10.1 Significance Criteria

An effect will be considered significant if results of the analysis indicate that any of the following criteria will be met due to implementation of the Program or Alternatives:

1. An increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)
2. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.

5.10.2 Determination Threshold

The following threshold is used to determine whether there is a significant adverse impact to local residential or commercial development resulting from traffic generated by the Program or any of the Alternatives:

- a) Traffic increases in excess of 10% Average Daily Trips (ADT) of the capacity of roads that serve residential and/or commercial areas appurtenant to the project.

5.10.3 Direct Effects Common to all Bioregions From Implementing the Program or Alternatives

Table 5.10.1 summarizes the effects on Transportation and Traffic utilizing information from the balance of this subchapter on the effects of implementing the Program across the State by bioregion

The potential effects on traffic and transportation resulting from implementing the Program or Alternatives are expected to be of short duration (<2 weeks): limited to the time periods during which work is actually occurring on the project(s). Most projects occur in remote areas and background traffic levels on these roads is generally far below the capacity of the roads. Therefore the effects of increased traffic levels due to VTP projects was analyzed relative to the communities in nearest proximity to the potentially treated areas.

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Table 5.10.1
Summary of Effects ^{1/} On Transportation and Traffic from Implementing the Proposed Program

Bioregion	Prescribed Fire	Mechanical	Hand	Herbivory
North Coast/Klamath	NA	NA	NA	NA
Modoc	NA	NA	NA	NA
Sacramento Valley	NA	NA	NA	NA
Sierra	NA	NA	NA	NA
Bay Area	NA	NA	NA	NA
San Joaquin	NA	NA	NA	NA
Central Coast	NA	NA	NA	NA
Mojave	NA	NA	NA	NA
South Coast	NA	NA	NA	NA
Colorado Desert	NA	NA	NA	NA

^{1/} Key to effects; adverse effects are those effects which degrade the diversity, structure, size, integrity, abundance or number of; or are outside the natural range of variability, for the resource at issue. Beneficial effects are those effects that improve the diversity, structure, size, integrity, abundance or number of; or are within the natural range of variability, for the resource at issue. SA/SB – significant adverse effects are those effects that are substantial, highly noticeable, at the watershed scale; and often irreversible. MA/MB – moderately adverse or beneficial effects – those effects that can be detected beyond the affected area, but are transitory and usually reversible. NA/NB – negligible adverse or beneficial effects – those effects that are imperceptible or undetectable.

Table 5.0.6 indicates that for the Proposed Program, on an annual basis, 88% of watersheds within the program area will not receive any VTP treatments. For the 12% of watersheds that could receive treatments annually, 98% of them will receive 3 treatments or less, and most (83%) will only receive 1 treatment annually.

It is unlikely that a single residential or commercial area will be affected by the traffic from more than one treated watershed annually. Furthermore, in a watershed where multiple treatments could occur within one year, the likelihood of all treatments occurring simultaneously is low. Therefore at most, the nearest residential or commercial area to a VTP treated watershed would be affected by two simultaneous projects.

The number of vehicles required for each treatment type is expected to vary from one to two light trucks every few days for a prescribed herbivory treatment, up to 10 vehicles per day for a large prescribed burn or hand thinning treatment. Most of the vehicles used on VTP projects will be used for transporting people or fire equipment, with a small number of heavy trucks required at the beginning and end of some projects to transport heavy machinery (dozers, masticators, etc.). There will not be regular heavy truck traffic to transport logs, as few if any logs will be removed from VTP projects in most all cases. Most projects will likely have 5-10 vehicles traveling to and from the work site each day, for total of 10-20 ADT per project.

The areas most sensitive to the increased traffic levels from VTP projects are likely to be two-lane, low volume roads that pass through residential and commercial areas traveling to and from project sites. Low volume roads are typically designed to handle <400 ADT (AASHTO, 2001).

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Assuming that the same road carries the traffic for two VTP projects simultaneously, 20-40 ADT would be generated. This would not result in a >10% increase in the maximum capacity of the typical low volume road that is likely to service most VTP projects sites. Traffic levels on the wide variability of low volume roads Statewide cannot be accurately predicted; however traffic levels/patterns occurring on VTP projects are expected to be similar Statewide

The Proposed Program and Alternatives 2 & 3 will conduct the same number of projects statewide per year, while Alternatives 1 & 4 will conduct fewer projects. Therefore the preceding analysis is based on the maximum number of projects possible amongst the alternatives. However, at the individual community level the assumptions regarding how many projects (vehicles) will affect a specific area is not significantly different between alternatives, (i.e., one or two VTP projects in the vicinity of a given community/road per year).

5.10.4 Bioregion Specific Direct Effects of Implementing the Program/Alternatives

The Sacramento Valley and Colorado Desert bioregions contained very few Cal 2.2 watersheds (70 and 37, respectively), whereas there were 690 watersheds per bioregion on average for the other eight bioregions (Table 5.0.6). The watersheds were also abnormally large for these two bioregions at 55,000 and 178,000 acres on average. Thus, the assumption stated above that only one community or road would be used to access multiple VTP projects in the same watershed may not be true for these watersheds. Given the large average size of these watersheds, multiple roads could be used to access different VTP projects in the same watershed. These two bioregions, because they have relatively few watersheds, were projected to have more projects per watershed (up to seven) than other bioregions (Table 5.0.6). However, given the large size of the watersheds it seems reasonable that the earlier assumption of a maximum of two VTP projects simultaneously utilizing the same road is still valid.

There is not likely to be a significant difference in the quantity of VTP traffic per roadway between bioregions. However, the potential impacts to communities may be different between bioregions, depending on existing traffic levels. Predominantly rural bioregions such as the Colorado Desert, Modoc and Mojave have lower existing traffic volumes than predominantly urban bioregions like the South Coast and Bay Area/Delta. Nevertheless, at the bioregional scale, VTP projects are not expected to result in a net increase in traffic volumes. Most vehicles used in VTP projects will be traveling to the site from within the same bioregion and were likely already in use somewhere else in the bioregion prior to working on the VTP project.

5.10.5 Indirect Effects of Implementing the Program/Alternatives

There are no indirect effects on traffic and transportation identified as a result of implementing the Program/Alternatives.

5.10.6 Determination of Significance

No significant adverse impacts (that would exceed 10% of the design capacity of roads serving VTP project sites) are expected from implementing the Program or any of the Alternatives.

5.10.7 Similar Effects Described Elsewhere

Traffic and transportation effects are also described in Section 5.9, *Population and Housing*.

5.10.8 Mitigation Measures for the Proposed Project

No mitigation measures are required because no potentially significant effects have been identified associated with traffic and transportation.

The following checklist item will be incorporated into the VTP project checklist:

A project-specific checklist item will require the applicant to confirm that additional VTP projects that rely on the same road will not be conducted simultaneously if combined traffic volumes will exceed 10% of the ADT of access roads in proximal residential or commercial areas.

Additionally, it will be the project applicant's responsibility to determine if the project would "Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways." (Criteria 2, 5.10.1 above). This determination cannot be made at the statewide, programmatic level.